

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

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“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 7345 (1994): Cardiovascular Surgery Instruments -
Anastomosis Forceps and Clamps - Patterns, Shapes and
Dimensions [MHD 6: Thoracic and Cardiovascular Surgery
Instruments]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

हृदय वाहिका शल्य क्रिया उपकरण — एनास्टोमोसिस
चिमटियाँ तथा क्लैप — नमूने, आकृतियाँ एवं आयाम

(दूसरा पुनरीक्षण)

Indian Standard

CARDIOVASCULAR SURGERY
INSTRUMENTS — ANASTOMOSIS FORCEPS
AND CLAMPS — PATTERNS, SHAPES AND
DIMENSIONS

(Second Revision)

UDC 615'472'4 : 616-089'843-74

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FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Thoracic and Cardiovascular Surgery Instruments Sectional Committee had been approved by the Medical Equipment and Hospital Planning Division Council.

This standard was first published in 1974 and revised in 1985 to incorporate tolerances for various dimensions and certain other modifications. The second revision of this standard has been undertaken to merge the requirements of anastomosis clamps, which were covered earlier in two separate Indian Standards, namely IS 8898 : 1988 'Clamp, anastomosis, Cooley's pattern' and IS 9927 : 1981 'Clamps, anastomosis, Dale-Femoral Popliteal's pattern'.

In view of the above merger, IS 8898 : 1988 and IS 9927 : 1991 stand withdrawn.

The necessary changes have been incorporated to cover the requirements in respect of patterns, shapes and dimensions only, since the general requirements, test methods and other specification aspects for these instruments are already covered in IS 3642 (Part 1) : 1990 'Surgical instruments specification : Part 1 Non-cutting, articulated instruments (*second revision*)'; the latter serving as a horizontal standard for all such type of Instruments.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

CARDIOVASCULAR SURGERY INSTRUMENTS — ANASTOMOSIS FORCEPS AND CLAMPS — PATTERNS, SHAPES AND DIMENSIONS

(Second Revision)

1 SCOPE

1.1 This standard specifies the patterns, shapes and dimensions for anastomosis forceps and clamps used in cardiovascular surgery.

2 REFERENCES

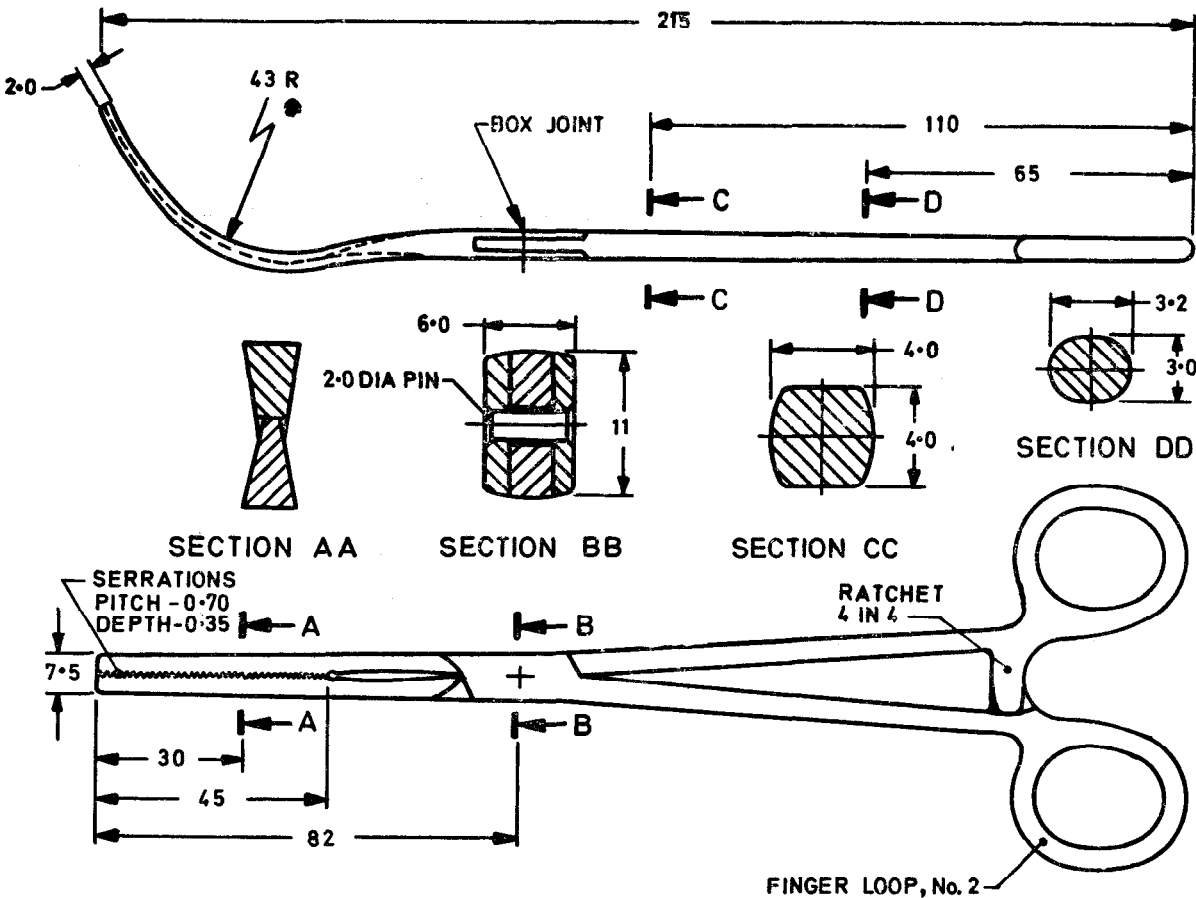
2.1 The Indian Standard IS 3642 (Part 1) : 1990 'Surgical Instruments — Specification : Part 1 Non-cutting, articulated instruments (second revision)' forms a necessary adjunct to this standard.

3 PATTERNS, SHAPES AND DIMENSIONS

3.1 The anastomosis forceps and clamps shall be of the following patterns:

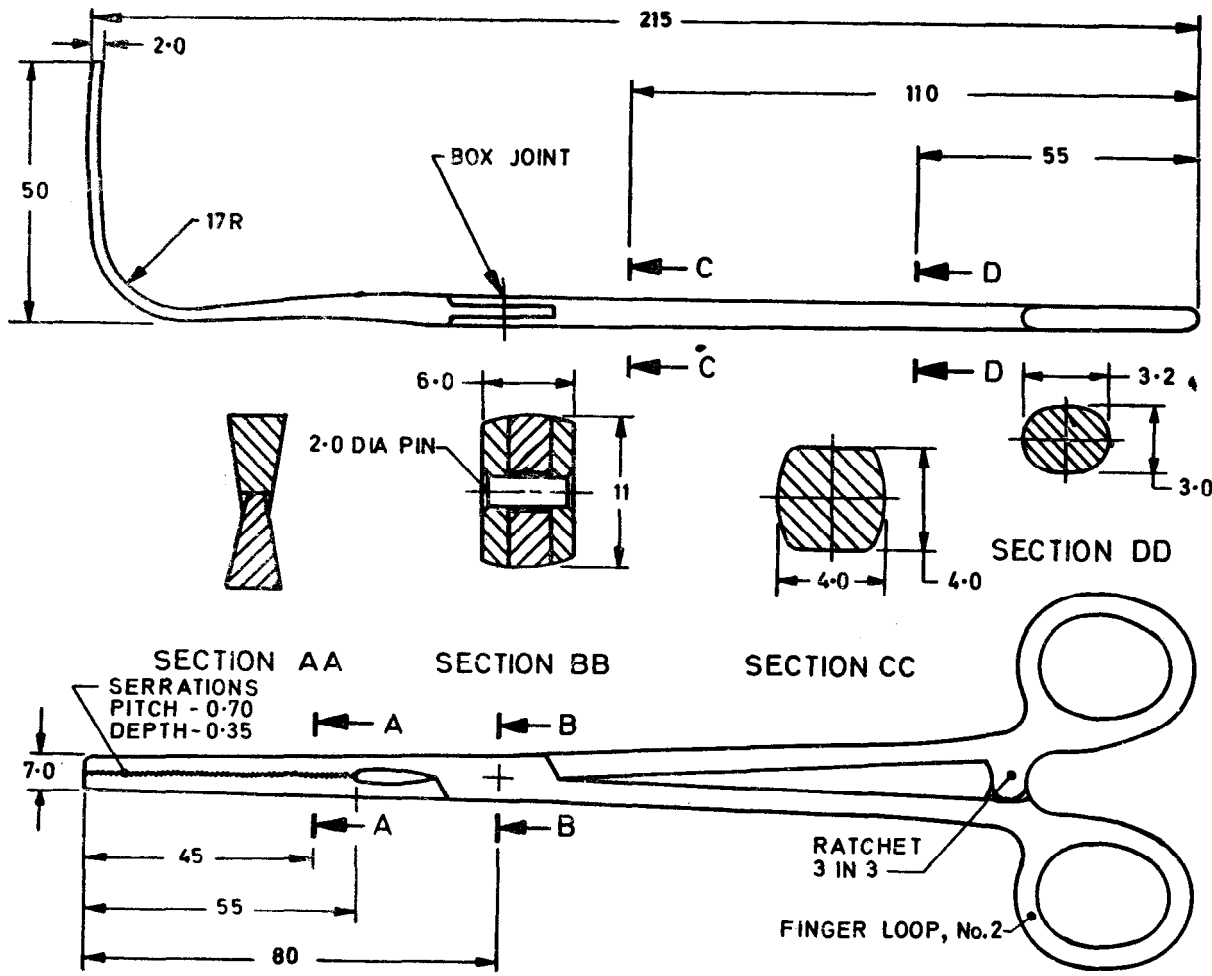
- Anastomosis forceps, curved, Pott's pattern;
- Anastomosis forceps, right angle, Pott's pattern;
- Anastomosis forceps, spoon shape, Pott's pattern;
- Anastomosis clamps, Cooley's pattern; and
- Anastomosis clamps, Dale-Femoral Popliteal's pattern.

3.2 The shape and dimensions of the anastomosis forceps and clamps shall be as shown in Fig. 1 to 5.



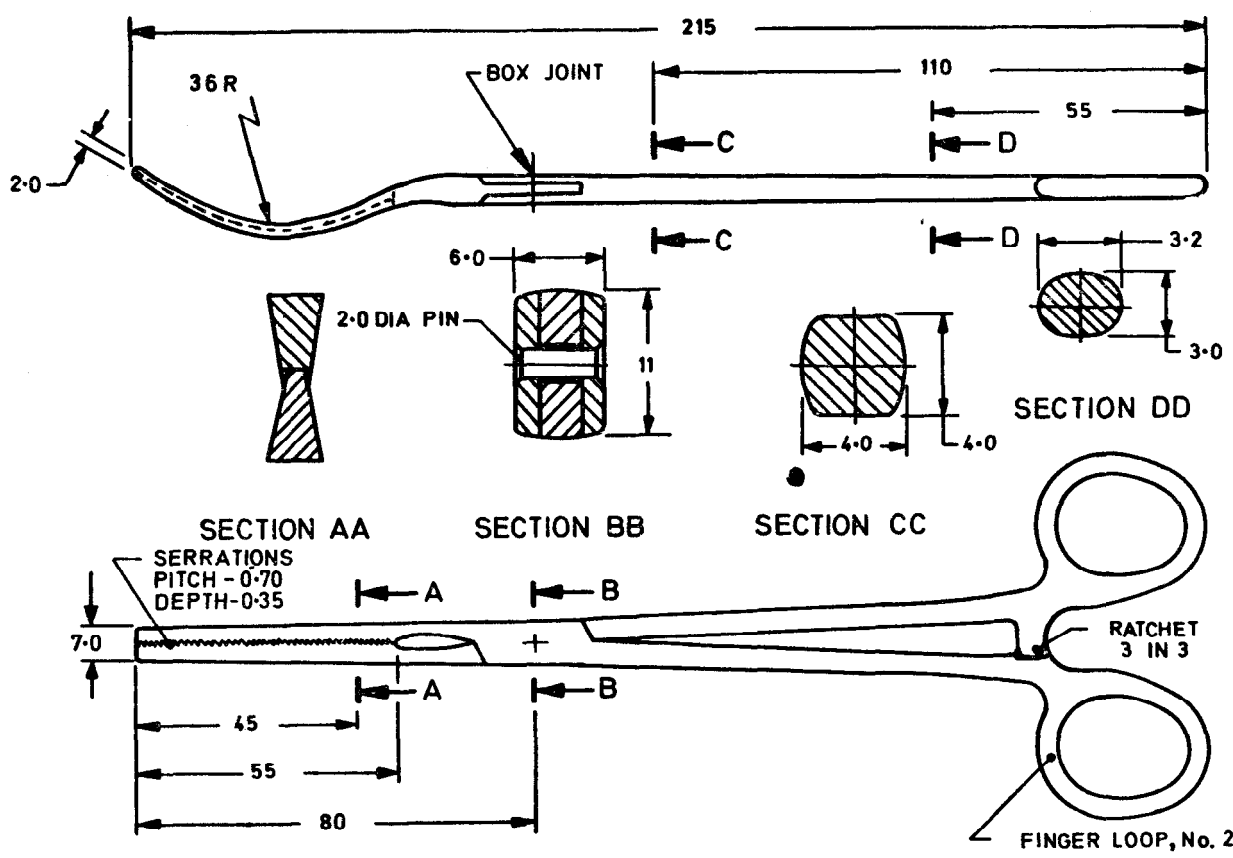
All dimensions in millimetres.

FIG. 1 ANASTOMOSIS FORCEPS, CURVED (POTT'S PATTERN)



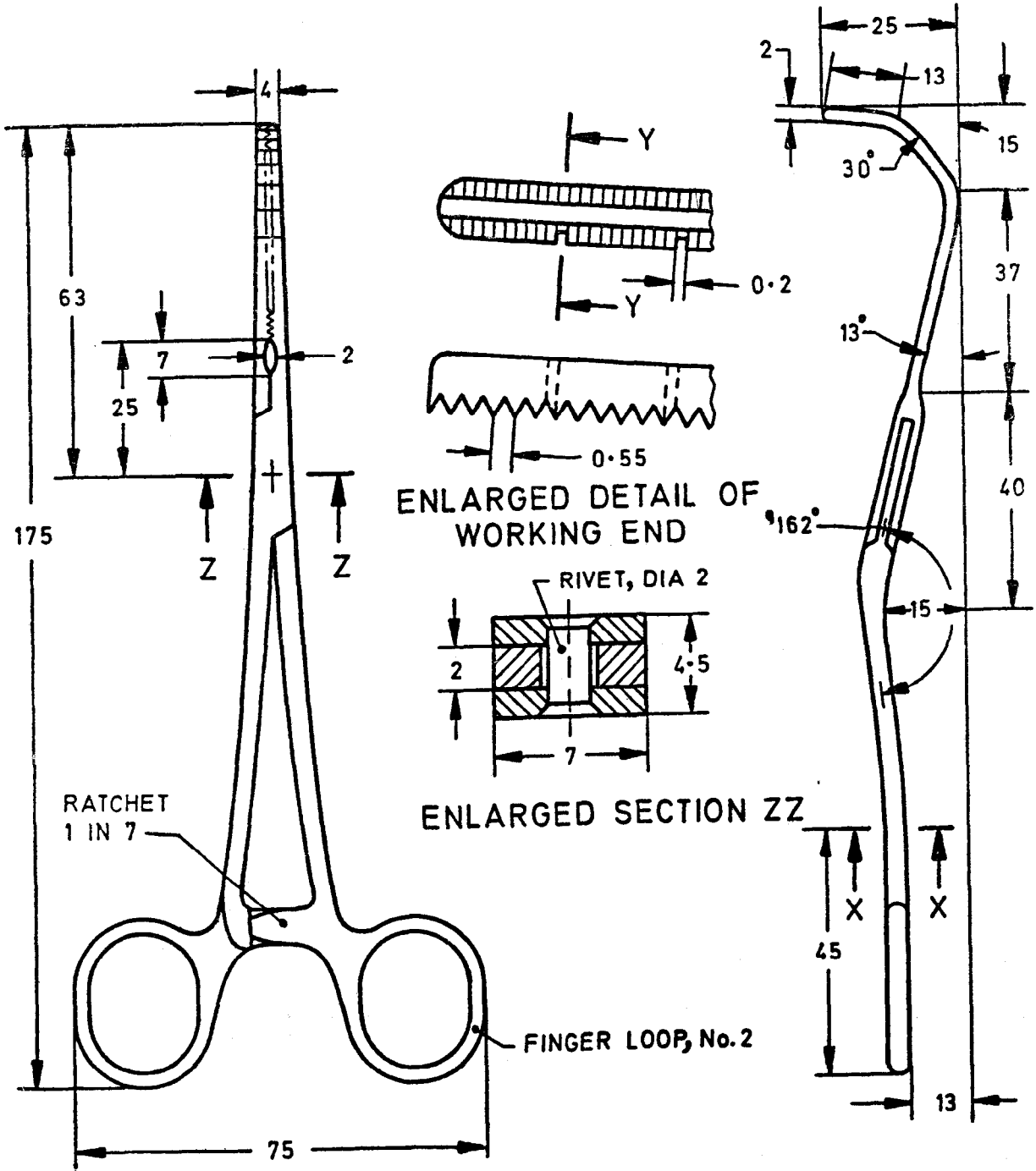
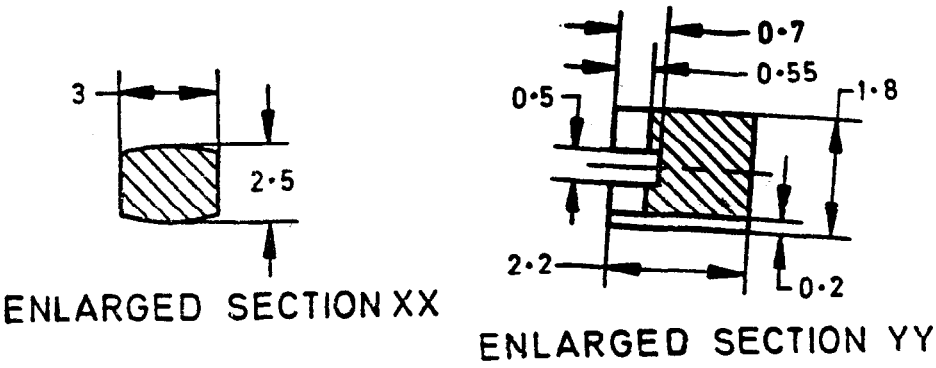
All dimensions in millimetres.

FIG. 2 ANASTOMOSIS FORCEPS, RIGHT ANGLED POTT'S PATTERN



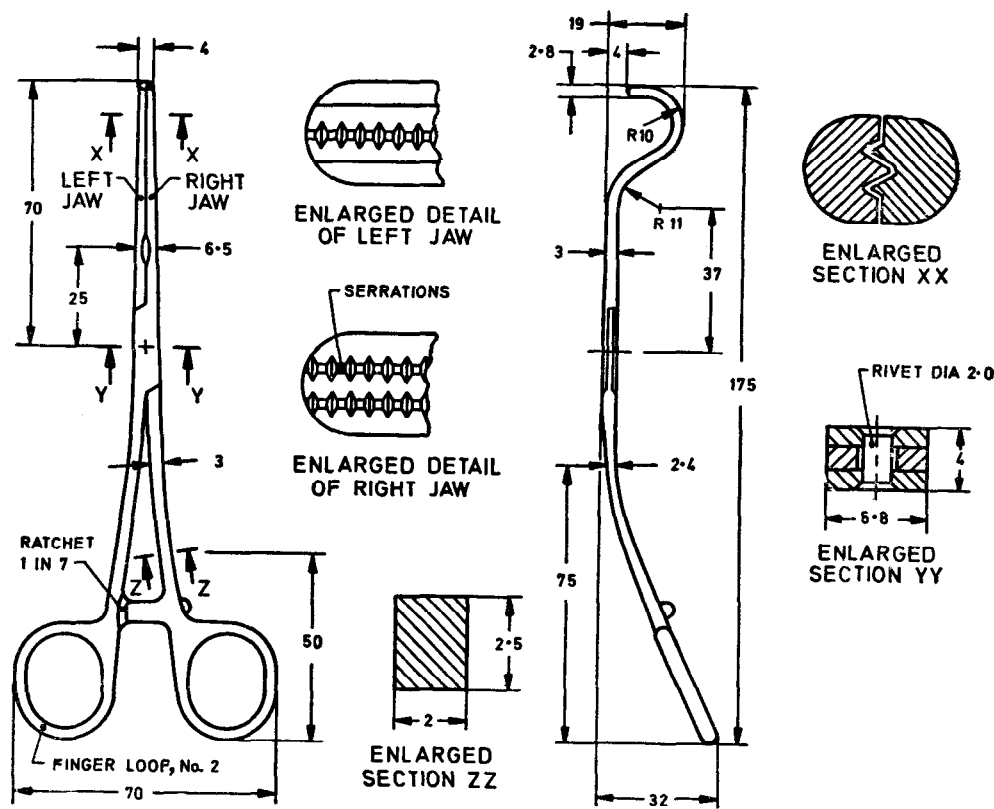
All dimensions in millimetres.

FIG. 3 ANASTOMOSIS FORCEPS, SPOON SHAPED (POTT'S PATTERN)



All dimensions in millimetres.

FIG. 4 CLAMP, ANASTOMOSIS, COOLEY'S PATTERN



All dimensions in millimetres.

FIG. 5 CLAMP, ANASTOMOSIS, DALE FEMORAL — POPLITEAL'S PATTERN

3.3 Joint

Joint of the instrument shall be box type conforming to 13.2.2 of Section 3 of IS 3642 (Part 1) : 1990.

3.4 Serrations

3.4.1 Serrations of the anastomosis forceps shall be as shown in Fig. 1 to 3 with non-truncated 60° profile. The serrations for anastomosis clamps shall be atraugrip type as shown in Fig. 4 and 5. The serrations shall satisfy the relevant requirements given in Section 2 of IS 3642 (Part 1) : 1990.

3.5 Ratchet

3.5.1 The ratchet teeth shall be provided in various combinations as indicated in Fig. 1 to 5. The force required to perform the load test in accordance with 14.2 of IS 3642 (Part 1) : 1990 shall be as given below:

Position of Ratchet Teeth Engagement	Force to be Applied for Load Test of Anastomosis	
	Forceps N	Clamps N
First Ratchet	2.5 ± 1	4.5 ± 2
Second Ratchet	5 ± 2	11 ± 2.5
Third Ratchet	7.5 ± 2	18 ± 4
Fourth Ratchet	10 ± 4	26 ± 4
Fifth Ratchet	—	32 ± 4
Sixth Ratchet	—	40 ± 7
Seventh Ratchet	—	40 ± 7

3.5.2 Closure Test

3.5.2.1 Closure test for clamps

When the first ratchet is engaged, the tips shall approximate to a gap of 2 mm and serrations shall not interdigitate. The gap shall become 1 mm on engaging the second step. Tips shall bite when the third step of the ratchet engages. The jaws shall fully close when the last step engages. The serrations shall match perfectly and truly.

3.5.2.2 Closure test for forceps

In case of 3 in 3 ratchet combination, when the first ratchet is engaged, the tips shall approximate to a gap of 1 mm and serrations shall not interdigitate. The serrations shall be just ready to be engaged at the second ratchet engagement. On engaging the third ratchet, all serrations shall fully engage along the entire length.

For 4 in 4 ratchet combination, the gap at the extreme end of the tip on first ratchet engagement shall be approximately 2 mm. The serrations shall be just ready to be engaged at the second ratchet engagement. Partial engagement of all serrations shall result when the third step of the ratchet is engaged. On engaging the fourth ratchet, all serrations shall fully engage along the entire length.

The serrations shall match perfectly and truly.

3.6 Finger Loops

3.6.1 The finger loops provided shall be of Size No. 2 conforming to Section 6 of IS 3642 (Part 1) : 1990.

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Amendments Issued Since Publication

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